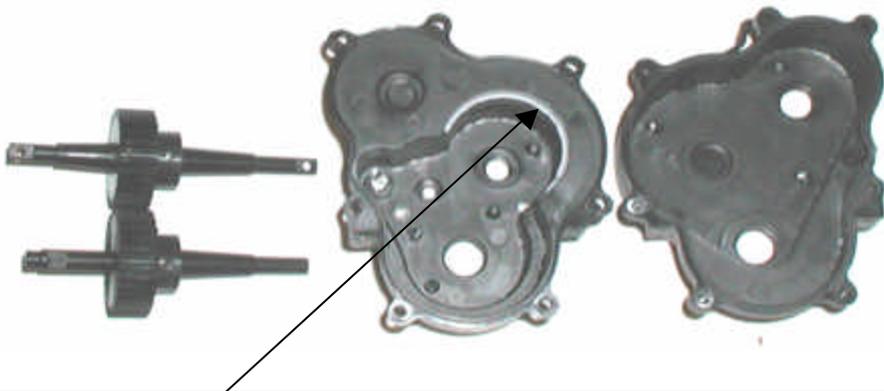


SuperMaxx FWD Only Transmission Kit Instructions

- **FWD-GE1 10mm Wide Tooth Face** (User must modify case)
- **FWD-GE2 10mm Wide Tooth Face** (includes modified case)
- **FWD-GE3 8mm Wide Tooth Face** (case mod not needed)



We counter bore here $\text{Ø}31.25\text{mm} \times 2.5\text{mm}$ deep for 10mm gears

Take your time and be patient the rewards will be well worth it.

Thank you for choosing Unlimited Inc and congratulations on purchasing the most robust, finely engineered and highest performing upgrades available for your Maxx.

If you have purchased the 10mm gears without the case the primary gear itself will take up a space of $\text{Ø}30\text{mm} \times 2\text{mm}$ of this case. In a production environment we bore it to $\text{Ø}31.25\text{mm} \times 2.5\text{mm}$ deep to ensure contact between the gear and housing cannot happen (it's pretty difficult to get repeatable numbers in plastic.) You need not go quite this large. For the 8mm gears no modifications are needed, but I trim the sharp edge with a hobby knife $\sim 1\text{mm} \times 1\text{mm}$ chamfer.

Warranty:

Lifetime for manufacturing defects.

Severe abuse policy: 30% off replacement. So if the replacement part is \$10 you pay \$7

Parts **MUST** be returned to Unlimited, Inc to be eligible for warranty or severe abuse replacement.

Warranty or severe abuse should be sent directly to Unlimited. Sending through point of purchase will only delay the process.

We are so confident that this is a bulletproof solution to the transmission problem we will extend our standard warranty a little further. There is no horsepower limitation on these gears.

We will replace the SuperMaxx gears as long as they are used appropriately, i.e., bearings are good, no contaminants (dirt, sand, etc), case halves kept tight, installed correctly etc.

These are easily detectable by us. Even under these conditions you are still eligible for our "severe abuse" policy. We of course cannot warranty anyone else's products and limit our liability to the SuperMaxx parts only.

We make every effort for perfection, but there are always some machining marks in any CNC product. If something is unacceptable to you we will happily replace the part(s). You must return the part(s) new and unused to Unlimited, Inc before replacement is shipped.

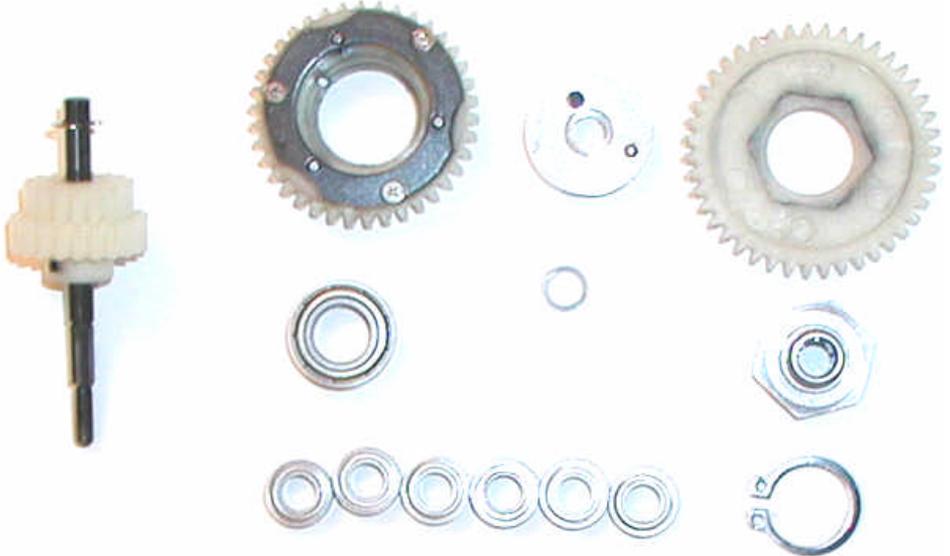
There are some burrs on the gears, we are working on processes to remove these. They are so fine it's simply a cosmetic thing. Don't worry about them.

I would appreciate it if you give me the opportunity to correct any problems before broadcasting them to the world. I am a small company and negative publicity can do a lot of harm. I will do all that is possible to make you happy. E-mail me at MonsterMaxx@att.net

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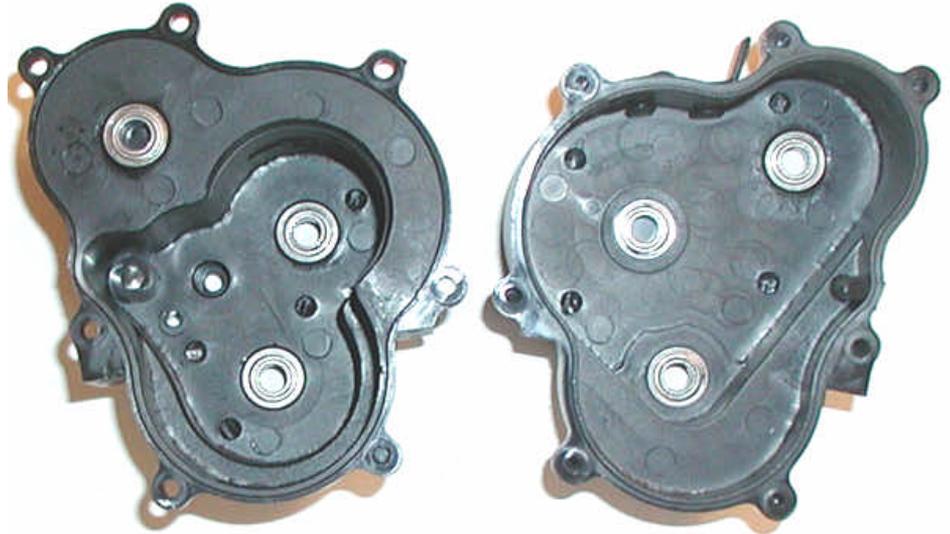
Disassembly and cleaning

- a) Remove transmission from truck
- b) Disassemble. Be careful when disassembling the 2speed hub that you do not unscrew the 2speed adjustment screw. The 2speed adjustment screw is angled slightly and the other goes straight down into the shaft. The angled one is the one that adjusts the shift point – leave this one alone. If you do mess this up, from what I can tell you should begin somewhere around 6 turns out from gently bottomed.
- c) Clean and inspect the parts in this picture, the rest may be set aside and will not be used.



- d) Pay close attention to the one way, we've had reports of slipping. The cure to date has been to spray out the one way really well with a cleaner and re-grease with suitable one-way grease like Racer's Edge.
- e) Replace any that show damage. It is normal for the hex between 1st gear and the one-way hub to have some play – this is not a sign of wear. Check the teeth on 2nd gear. If you've used too long a mounting screw you will have damaged these. You need not remove 1st gear from the one-way hub
- f) **Seal the reverse idler and shifter holes in the front case half with silicone.**

- g) Press the five of the 5x11x4 bearings into the case, leave one of them out of the front case out for now.



Primary shaft assembly

- i) Assemble 1st gear (TRX4984) to the one-way hub (TRX4986) (if you've taken it apart.)
- ii) Lubricate one-way bearing with one-way bearing grease. Heavy greases will foul it, causing it not to grab. Best done by putting a little inside the bearing and wiping it around with a small Allen wrench. **DON'T SKIP this.** High horsepower engines are killing these and it appears to be a lubrication failure. Since the shaft is the inner race, the death of the one way takes the shaft with it.
- iii) Lubricate shaft for one-way bearing



- iv) Slide the one-way and gear onto the shaft. Wipe off the excess lube.

- v) Install 2nd gear (TRX4985), the 19mm bearing, and the plastic washer



- vi) Prepare the 2 speed hub (TRX4998). Remove the set screw and apply a little red Loctite and put the set screw back in. **Don't overdo it with the Loctite – it will bleed into the one way bearing and seize up the bearing.** The hub has a counterbore (washer sized depression) in one side and a shoulder (washer sized raised area) on the other. The counterbored side faces the one way (see where the washer fits) and the shoulder faces out.



- vii) Now align the flat on the shaft so it's facing the hole in 2nd gear, align the hub so the set screw will be accessible through the hole and slide it on the shaft. Begin tightening the set screw. As you get down close to being tight, wiggle the shaft back and forth to ensure you are on the flat. Prior to full tight, pull the hub away from the gears, like you are trying to pull it off the shaft. Snug the set screw – but not fully tight yet.

viii) You need to assure the hub is in the right location. This will allow 1st gear and the 1 way hub to have a teenie bit of end play. A teenie bit is “you can just barely feel it move” or .001”-.005”. The easiest way to ensure this is to make the 2spd hub flush with the step on the shaft for the bearing. Slip the bearing that we didn’t press into the housing onto the end of the shaft, turn it upright on the table and push down until you hear the pop of the hub moving. It will now be flush with the step on the shaft. Fully tighten the set screw. You should now have that teenie bit of end play for the one-way bearing.

ix) Check that everything moves freely.

h) Assemble transmission DRY first. The lubricant is sticky and will fool you when feeling for free movement and end play. We’ve found a lot of variation in the cases and you need to shim for end play on the shafts. You want them to have that teenie bit of end play (.001”-.005”). Preload (no end play) on the bearings will cause premature bearing wear and excessive drag. **Be sure the bearings are fully seated in the case.**

i) I’ve included some shims with the kit to do this. Normally I do each shaft individually. If you do them all together, and one has preload it will spread the case slightly and throw off the others.

ii) Start with a .010 shim (the thick one) all shims go on the front end of the shaft (front of transmission). Do not put the shims on the back side.

iii) Put each shaft into the case and assemble. You need not put ALL the screws in, just the ones immediately around the shaft under inspection will be sufficient.

iv) Check for that teenie bit of movement. If you can just barely feel the endplay in the shaft that’s good. If it chucks back and forth, that’s too much, take it apart and add a .003” shim. If you can’t feel any, that’s too tight. Feel the drag on the shaft so you know what it feels like. Take it apart, remove the .010” shim and add two .003” shims.

v) Do this for all 3 shafts.

j) Wrap it up: Take the back



half of the transmission case and install shafts with the appropriate shims. In this order:

- i) the input shaft (TRX 4992)
 - ii) the primary shaft assembly
 - iii) the output shaft
 - iv) the front half of the case and the screws.
- k) Now check again for free movement, the correct amount of end play.
- l) All good? Now take it apart one more time, paint each tooth with grease (**don't overdo this**) and reassemble.
- m) Reassemble your brakes, spur etc and you are all set to go.
- n) If you've forgotten you can **plug the open holes** in the case with a little silicone. **Don't skip this**, crud entering the transmission will quickly destroy your investment.

FYI: The spur should free wheel when you rotate it clockwise and should turn the output shaft when rotated counter-clockwise. This is the one-way bearing behaving correctly.



And that's about it folks. If I've missed anything e-mail your suggestions to MonsterMaxx@att.net and I'll add it to the next version of the instructions.

Now check everything over and go have some fun.
After your first run re-check everything carefully.

Thank you for your support,

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